



# Overview

Tank Automotive Research,  
Development & Engineering Center

UNCLASSIFIED: Dist A. Approved for public release

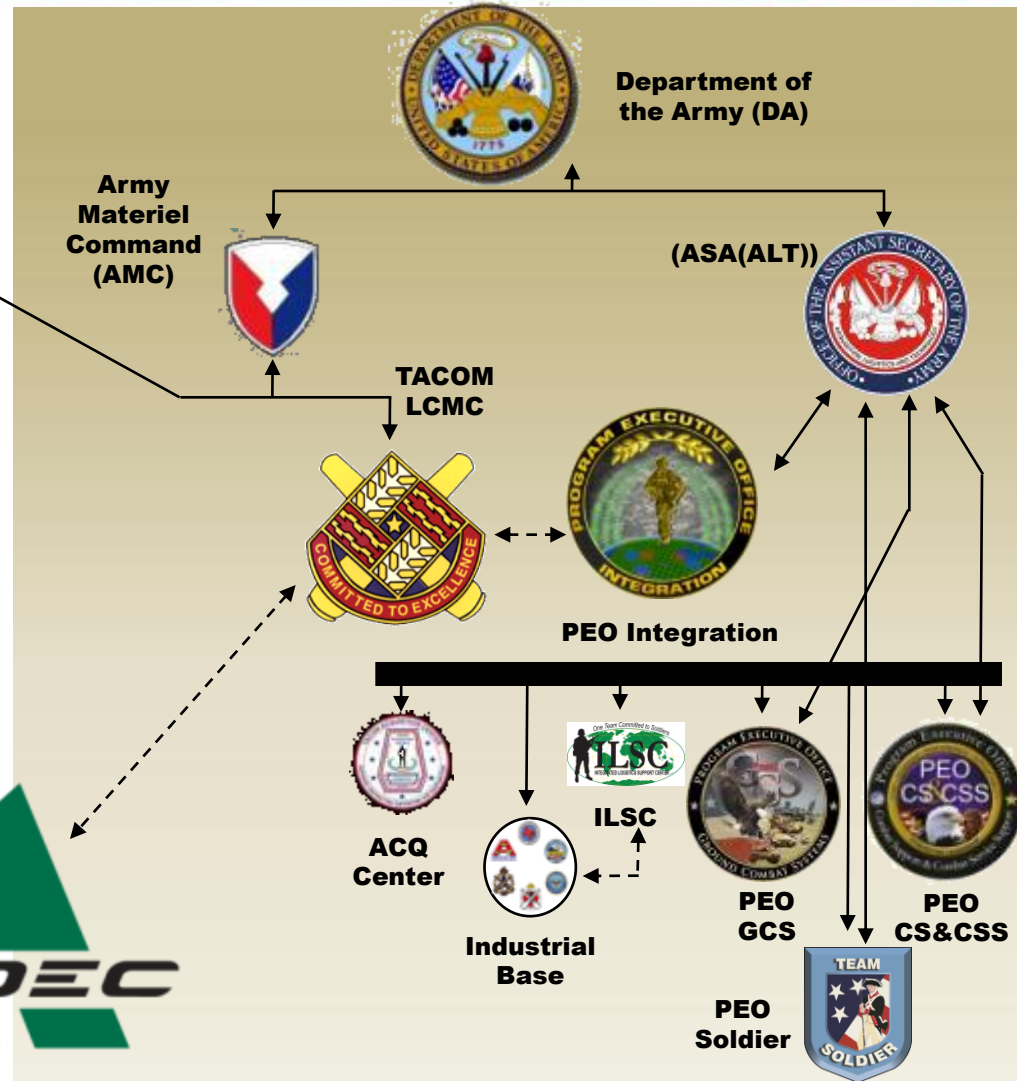
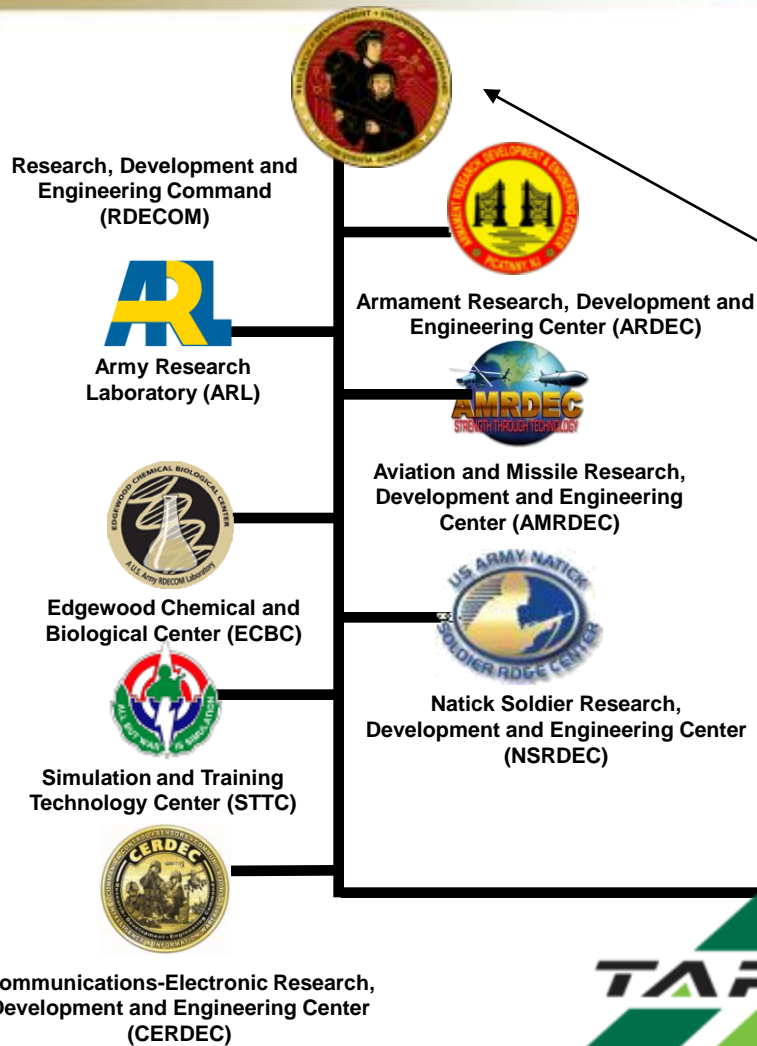
- Provides full life-cycle engineering support and is provider-of-first-choice for all DOD ground combat and combat support vehicle systems.
- TARDEC develops, integrates and sustains the right technology solutions for all manned and unmanned DOD ground systems and combat support systems to improve current force effectiveness and provide superior capabilities for the future force.
- .

***Ground Systems Integrator  
for the Department of Defense***



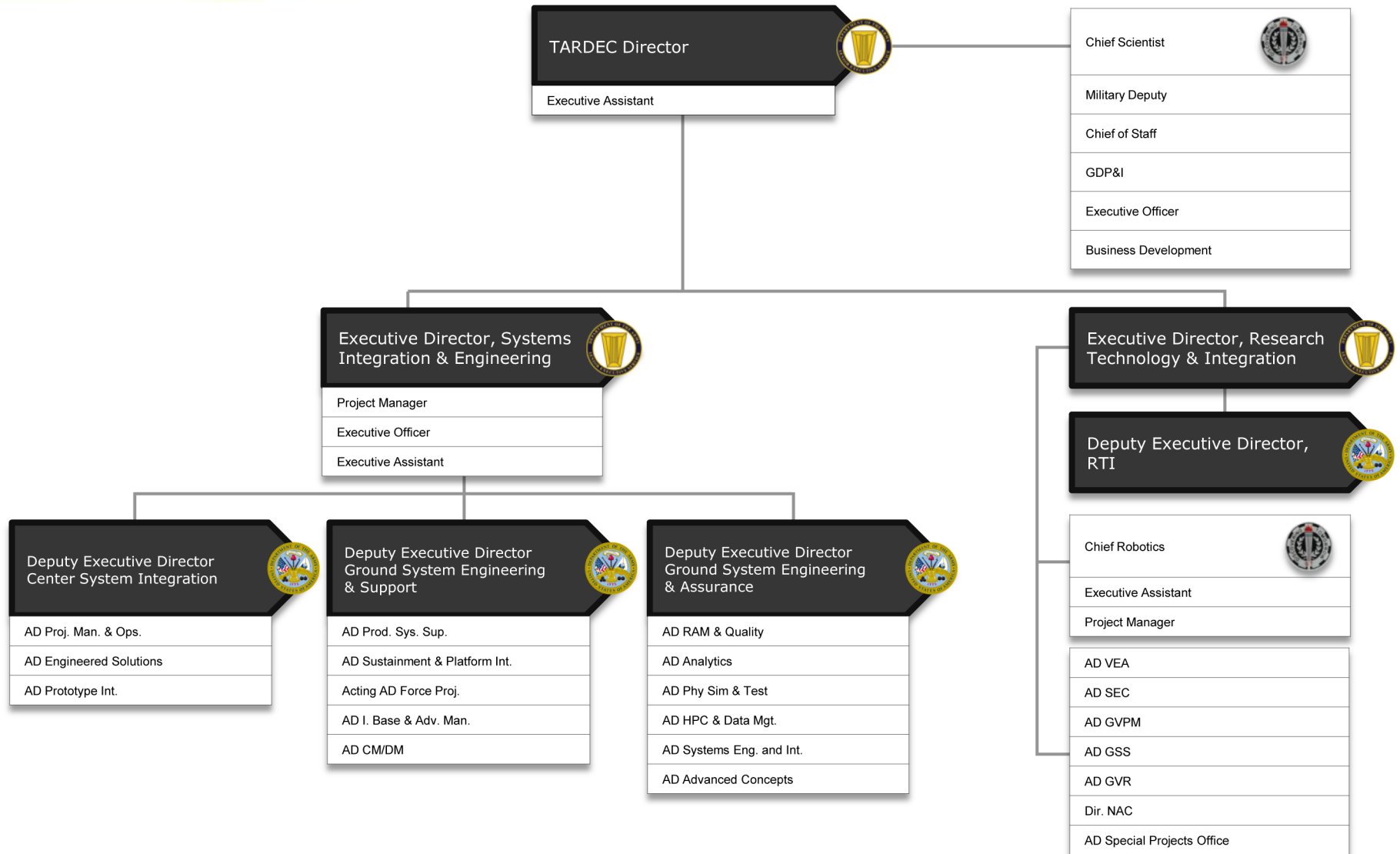
**Responsible for Research, Development and Engineering Support to **2,800** Army systems and many of the Army's and DOD's Top Joint Warfighter Development Programs**

**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**



**Reach back to over 8,500 Scientists and Engineers**

**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**





## Ground System Power & Mobility

- Prime Power (Powertrain)
- Non Primary Power
- Power & Thermal Management
- Energy Storage
- Track & Suspension
- Alternative Energy



## Ground System Survivability

- Integrated Vehicle Protection Systems
- Active Defense
- Signature Management
- Laser Vision Protection
- Ballistic Protection
- Crew Survivability



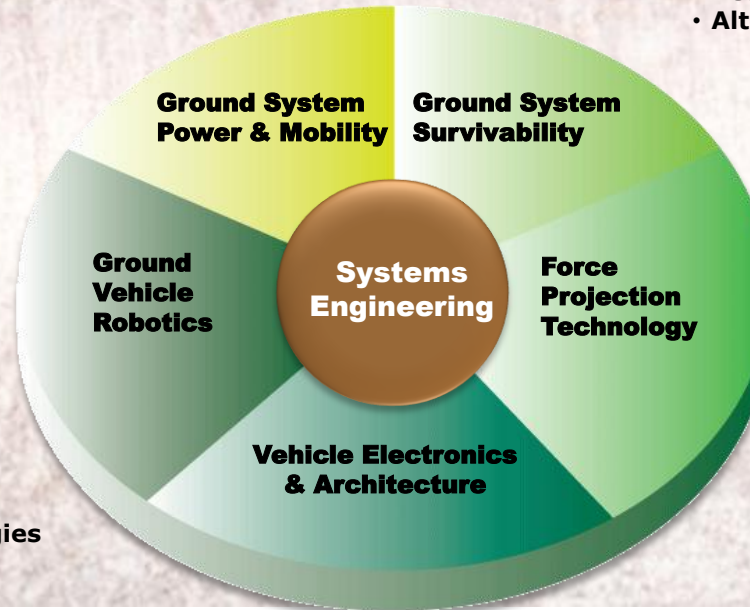
## Force Projection Technology

- Water Generation, Purification, Storage, Distribution & Quality Surveillance (QS)
- Petroleum Storage, Distribution & QS
- Material Handling Equipment
- Mechanical Countermine Equipment
- Tactical Bridging
- Petroleum, Oils & Lubricants Technology
- Alternative Fuels



## Ground Vehicle Robotics

- Autonomous Robotics Systems
- Safe Operations Technologies
- Indirect Vision Technologies
- Unmanned Systems Technology Development
- 360° Situational Awareness Technologies
- Soldier Machine Interfaces
- Connected Vehicles



## Vehicle Electronics & Architecture

- Electronics Integration
- Data Architecture
- Condition-Based Maintenance (CBM+)
- Power Architecture/Management



## Force Projection

- Fuel & Water Distribution
- Force Sustainment
- Construction Equipment
- Bridging
- Assured Mobility Systems

## Combat Vehicles

- Heavy Brigade Combat Teams
- Strykers
- MRAPs
- Ground Combat Vehicles (Future)



## Tactical Vehicles

- HMMWVs
- Trailers
- Heavy, Medium and Light Tactical Vehicles

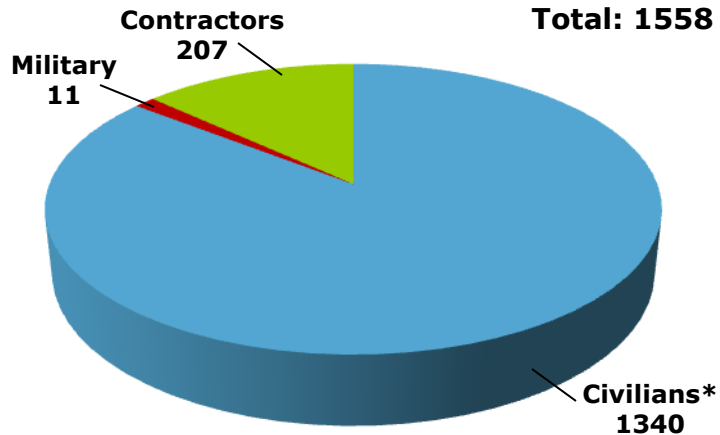
## Robotics

- Technology Components
- Demonstrators
- Military Relevant Test & Experimentation
- Transition & Requirements Development

**TARDEC Engineers Provide Cradle-To-Grave Engineering Support**

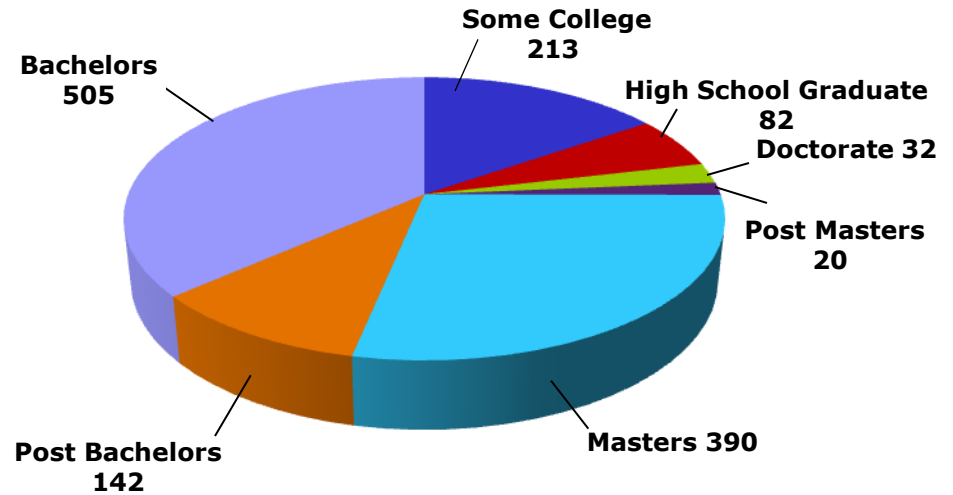
## Total Workforce

**Total: 1558**



\*Includes permanent/term employees, local interns, STEPs, and local SCEPs (in a pay status).

## Education



**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

## Advanced Concepting



**Future Force**



**JLTV**

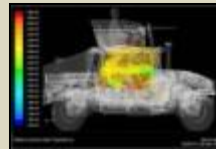


**MRAP**

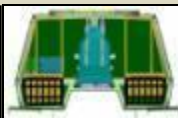
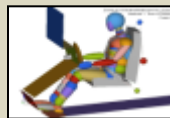


**FTTS**

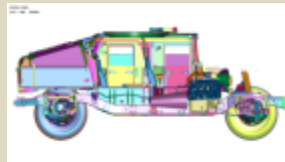
## Analytics



**Thermal / CFD**



**Crew Safety**



**Structures/Durability**



**Blast**



**Dynamics**

## Hardware & Man-In-The-Loop Simulation



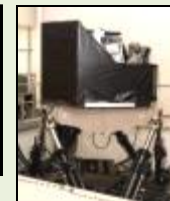
**Characterization**



**Durability**



**Turret Testing**



**Human Dimension**



**Virtual Environments**

## Prototype & Demonstrators



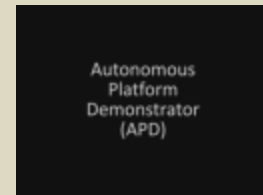
**FTTS**



**FED**



**TWVS**

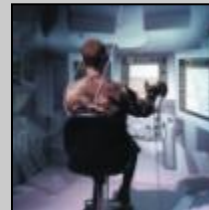


**APD**

## HPC & Data Management



**HPC**



**To provide rapid assessment and integration services throughout the Life Cycle of both Technology and System/Platform Development Programs.**

# GSPEL Provides Superior Testing Capabilities for Army, Partners



The GSPEL is a 30,000-square-foot laboratory complex with eight state-of-the-art labs in one building.



**Chartered by Secretary of the Army 21 June 1993**

**Mission:** *"The Center will serve as the Army focal point for the development of dual-use automotive technologies and their application to military ground vehicles. It will focus on facilitating joint efforts between industry, government and academia in basic research, collaboration, technology, industrial base development and professional development."*

**"Leveraging Opportunities to Fill Technology Gaps."**



# TARDEC Ground Vehicle Gateway



**We're Open for Innovation!**

**TARDEC's  
Ground Vehicle Gateway  
is YOUR entry point!**

- **Submit your technology for review**
- **Request Testing Services**

<https://tardec.groundvehiclegateway.com/>



## Component Technology Demonstrations





# Enterprise Market Investigation Process (EMIP)



## □ EMIP is:

- A **selective market research** approach “collecting and analyzing information about capabilities within the market to satisfy agency needs” (FAR Part 2.101) focused on requirements, safety, and / or innovation for Soldier and Ground Systems.
- An **education of government representatives** on industry’s investment in advanced technologies at the component (not end item) level through physical demonstrations.
  - Government representatives are subject matter experts from a variety of disciplines such as engineering, logistics, testing, and training, and include user representatives.
  - Advanced technologies are those with a **technology readiness level of 7, 8 or 9.**

## □ EMIP is not:

- A request for proposal, a source selection, a program, or an acquisition office.
- Funded apart from the demonstrators’ application fee.



- ❑ EMIP can:
  - **Refer technologies to other government departments** that may make an internal acquisition decision based on program priorities and other considerations.
  - **Provide the demonstrator written feedback** within 30-60 days upon completion of the EMIP demonstration.
- ❑ Demonstrations are scheduled **three times a year**, typically in April, July, and October.
- ❑ The EMIP process applies primarily to vehicles that the PEO CS&CSS manages (<http://peocscss.tacom.army.mil/>).
- ❑ The Starter Package and further information are available at the EMIP website: <http://peocscss.tacom.army.mil/EMIP.html>

<http://tardec.army.mil/events.aspx>

- **Society of Automotive Engineers World Congress**

16-18 April (Cobo Center)

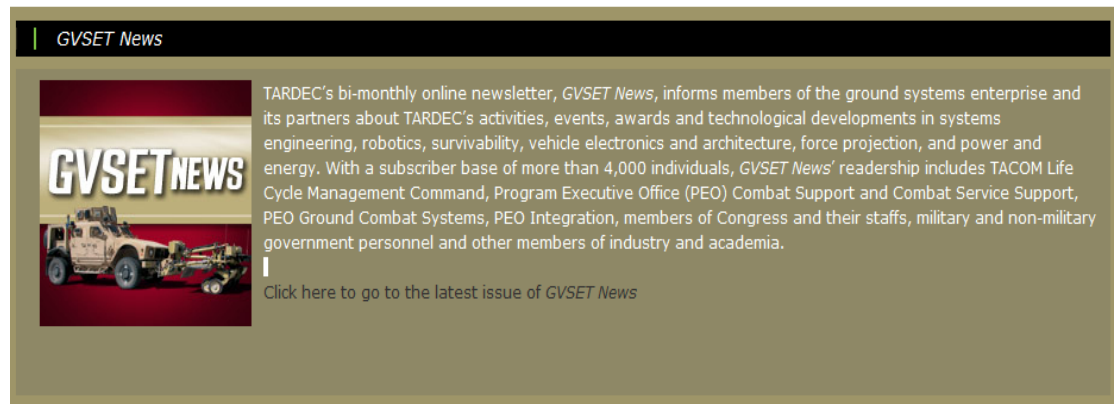
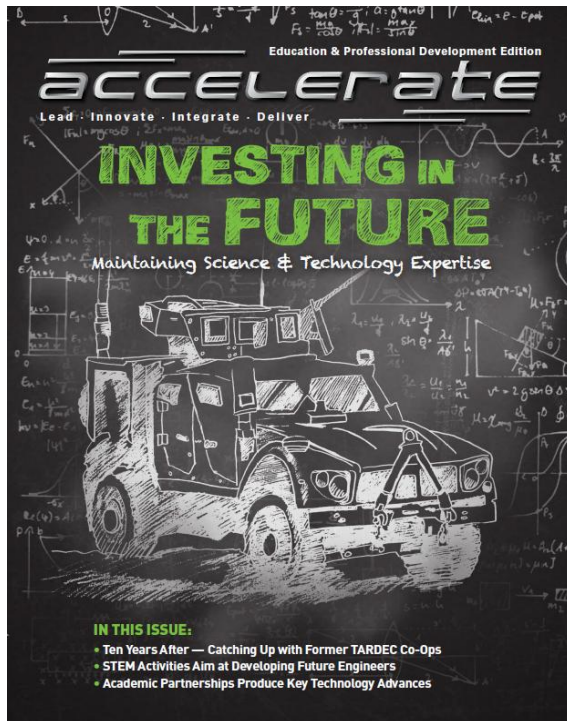
- **Automotive Research Center (ARC) Conference**

6-7 June (University of Michigan, Ann Arbor)

- **Ground Vehicle Systems Engineering & Technology Symposium (GVSETS)**

August (in conjunction with NDIA)

<http://tardec.army.mil/publications/default.aspx>



[Security and Privacy](#) | [Disclaimer](#) | [Webmaster](#) | [Site Map](#) | [Contact Us](#)  
Last Modified 04/12/2012



**TECHNOLOGY DRIVEN. WARFIGHTER FOCUSED.**

# QUESTIONS



Email us:

[usarmy.detroit.rdecom.mbx.tardec-ground-vehicle-gateway@mail.mil](mailto:usarmy.detroit.rdecom.mbx.tardec-ground-vehicle-gateway@mail.mil)